

**AGENDA ITEM:** Telecommunications Infrastructure

**ISSUES TO COME BEFORE THE BOARD AT THIS MEETING:**

1. Review the status of the Library of California Telecommunications program.
2. Consideration of funding regional telecommunications projects.

**RECOMMENDED MOTION FOR CONSIDERATION BY THE BOARD:** I move that the Library of California Board adopt the following criteria for the regional telecommunications infrastructure:

- Regional telecommunications programs geographically conform to Library of California planning regions, with participation by libraries that meet Library of California Interim Eligibility requirements and are capable of supporting the appropriate technologies.
- When a Regional Library Network replaces a planning region eligibility consists of membership in the Regional Library Network and the ability to support the appropriate technologies.
- Regional Library Networks address regional resource sharing protocols and ongoing regional telecommunications infrastructure needs in their annual Plans of Service.
- Regional Library Network gateway catalogs are available to the general public via remote Internet browsers.
- Regional Library Networks use the Z39.50 protocol as the access protocol for their telecommunications infrastructure programs.
- Regional telecommunications programs should include electronic interlibrary loan with the goal of public-initiated loan requests via the Internet.
- Regional Library Networks address the issue of access to materials outside the region through the adoption of standards and resource sharing protocols in collaboration with other Regional Library Networks.
- Libraries requesting Z39.50 server software apply through the Library of California Z39.50 Server Software Grant program.

**RECOMMENDED MOTION FOR CONSIDERATION BY THE BOARD:** I move that the Library of California Board authorize the expenditure of up to \$2,262,000 to support project grants for regional telecommunications infrastructure leading to the establishment of regional library catalog access and electronic interlibrary loan, and electronic patron authentication and that the Board direct its Chief Executive Officer to develop a grant program to award these funds.

At its February 2000 meeting the Board adopted program priorities for FY 1999-2000 that were developed at its planning meeting on February 16, 2000. Among these priorities was:

*“Board decides telecommunication model at the regional level and implements the selected model.”*

An additional program priority was proposed for FY 2000/2001:

*“Implement ILL at the regional and inter-regional levels.”*

Staff recommends that \$1,850,000 in grant opportunities be made available to the planning regions to develop projects to facilitate access and resource sharing within each region for participating libraries and their users. The regional network telecommunications grant application will tailor each project to meet current levels of readiness. The goal is to establish electronic access and interlibrary loan within each regional network, based on existing resources (Exhibit A) and to identify a framework for statewide connectivity.

An additional recommendation is to fund a trial patron authentication project in at least one planning region that will test the feasibility of remote patron registration and status verification to allow direct user access to such services as electronic interlibrary loan, direct loan, electronic document delivery, and access to licensed databases.

To develop an approach consistent with the LoC Board direction, staff proposes the following criteria for LoC funded regional telecommunications projects:

- Regional telecommunications projects must geographically conform to Library of California planning regions, with participation by libraries that meet Library of California Interim Eligibility requirements and are capable of supporting the appropriate technologies.
- When a Regional Library Network replaces a planning region eligibility will consist of membership in the Regional Library Network and the ability to support the appropriate technologies.
- Library of California regional telecommunications project gateway catalog access must be available to the general public via remote Internet browsers.
- Regional telecommunications projects must use the Z39.50 protocol as the access protocol.
- Regional telecommunications projects should include electronic interlibrary loan with the goal of public-initiated loan requests via the Internet.

- Regional telecommunications projects must address the issue of access to materials outside the region.
- Libraries requesting Z39.50 server software must meet the requirements of the LoC Z39.50 Server Software Grant program and must apply for server software through that program.

It is essential that this funding be allocated for several reasons:

1. The Library of California Act calls for development of a telecommunications infrastructure to support up to 1,000 libraries, including, but not limited to, the costs of linking systems and installing regional servers.
2. The Library of California's support for Z39.50 server software grants is not by itself sufficient to implement the technology that allows libraries and library users enhanced access to regional collections.
3. Local libraries have insufficient resources to develop and deploy resource-sharing systems. The State has assumed some level of support for library resource sharing in both the California Library Services Act and the Library of California Act.
4. The Library of California Board priorities for FY 1999/2000 direct staff to take steps to implement the regional level telecommunications model pursuant to the Library of California Act (Exhibit B)

## BACKGROUND:

This priority follows previous Board actions making \$7,500 Z39.50 server software grants to individual libraries that meet Library of California interim eligibility standards and minimum technical requirements.

In addition to the Z39.50 server grants, the LoC Board uses CLSA funds to subsidize the ongoing cost of Z39.50 access to public library catalogs (\$500 per year). It also subsidizes the ongoing cost of Z39.50 Gateway Client systems that are managed by California Cooperative Library Systems (\$5,000 per year).

Z39.50 connectivity establishes the infrastructure necessary to create a virtual statewide database representing the holdings of California libraries. Such a database is an important component of a cluster of access services envisioned in the Library of California Act.

In developing the Board's program priorities staff reviewed the current status of Cooperative Library System (CLS) and local library initiatives to implement Z39.50 connectivity projects on a regional basis. The *Linked Systems Study Update and*

*Proposed Technology Infrastructure for the Library of California*, Joan Frye Williams, November 15, 1999 was helpful in this analysis.

In her Study, Ms. Frye Williams reports:

“Since the last survey of California Linked Systems Projects..., substantial progress has been made. Local Z39.50 server software and regional Z39.50 gateway software have been installed and links have been established for more than fifty additional libraries, including public, academic, school and special libraries. As a direct result if these projects, a number of libraries that have never been accessible via OCLC or any other resource sharing tool now offer their collections for searching over the Internet.”<sup>1</sup>

## **RELATED ISSUES:**

### *BILL AND MELINDA GATES FOUNDATION*

Ninety-three percent of the eligible public libraries participated. Libraries identified as “300K” are the largest library jurisdictions with service populations greater than 300,000. Installation is underway, and scheduled to be completed by the end of June.

Awards:

|             | PCs  | Servers | Buildings | Labs | Eligible | Participating | Total          |
|-------------|------|---------|-----------|------|----------|---------------|----------------|
| 300K        | 1554 | 16      | 301       | 17   | 23       | 22            | \$4,114,700.00 |
| Southern CA | 219  | 40      | 59        | 0    | 33       | 33            | \$858,139.50   |
| Northern CA | 1025 | 148     | 216       | 26   | 71       | 63            | \$3,869,837.21 |
| Total CA    | 2798 | 204     | 576       | 43   | 127      | 118           | \$8,842,676.71 |

Totals do not include the cost of installation, training, and technical support, which is estimated at \$11 million.

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<sup>1</sup> *Linked Systems Study Update and Proposed Technology Infrastructure for the Library of California*, Joan Frye Williams, November 15, 1999, p. 11.

## EXHIBIT A

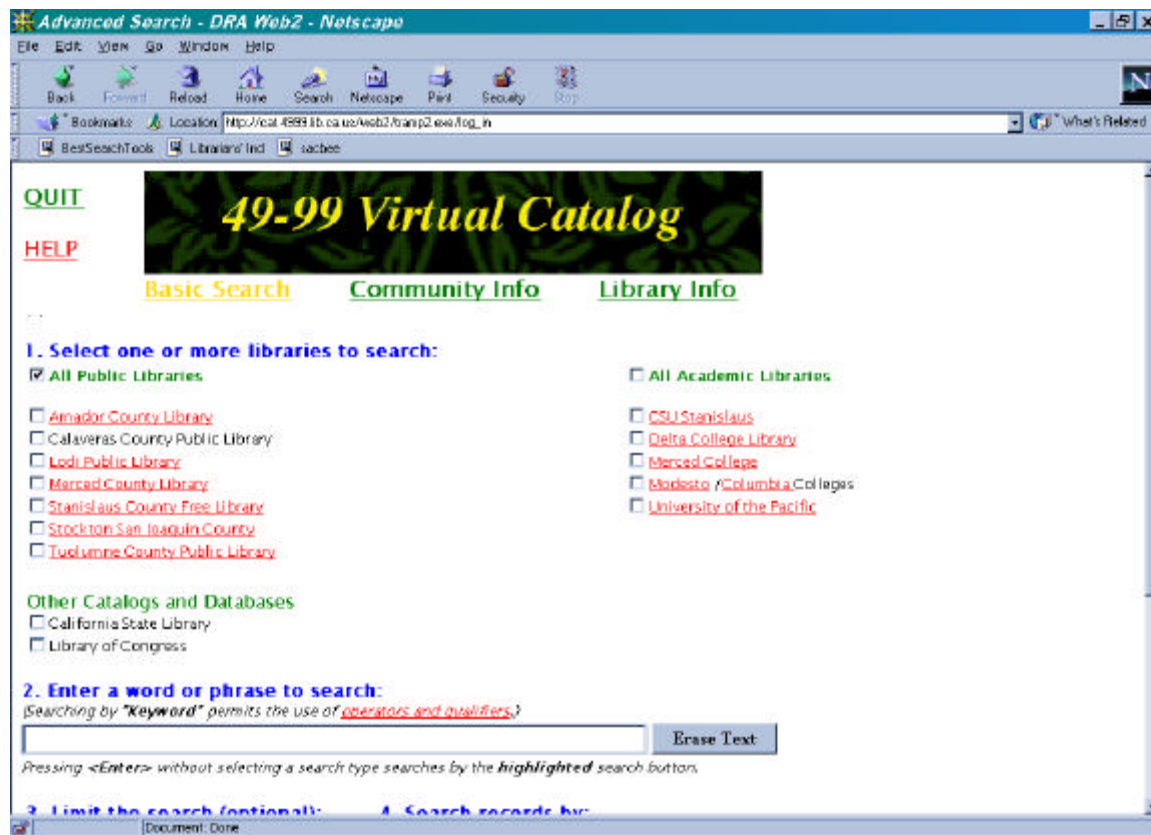
### CLSA Cooperative System linked systems projects

The current status of Cooperative Library Systems linked systems projects. In most areas of the state these efforts are underway, with varying degrees of capability and access:

*49-99 Cooperative Library System – Catalog access via Web 2 gateway client with most public and some academic libraries.*

*A gateway client is a specially configured Internet server capable of searching multiple library automation systems under the Z39.50 protocol and displaying search results. Access is typically by author, title, subject and keywords.*

Sample screen from 49-99 Virtual Catalog



*Bay Area Library and Information System - Some library catalogs available on the WebZ gateway client operated by Silicon Valley Cooperative Library System.*

*Black Gold Cooperative Library System* – No linked systems project

*Inland Library System* – No linked systems project

*Metropolitan Cooperative Library System* – An EpixTech RSS gateway server and interlibrary loan system is currently being installed in collaboration with Santiago Library System. Seventeen libraries will participate.

*Monterey Bay Area Cooperative Library System* – Catalog access project with most public and some academic / special libraries available on a Web2 gateway server.

*Mountain-Valley Library System* - Catalog access project with most public and some academic / special libraries available on a Web2 gateway server.

*North Bay Cooperative Library System* – CPS URSA access and electronic interlibrary loan system (a.k.a. “Supersearch”)

*North State Cooperative Library System* - No linked systems project. An LSTA proposal was submitted for a linked systems project in FY 2000/01.

*Peninsula Library System* – Access via the WebZ gateway server operated by Silicon Valley Library System and participation in North Bay’s Supersearch project.

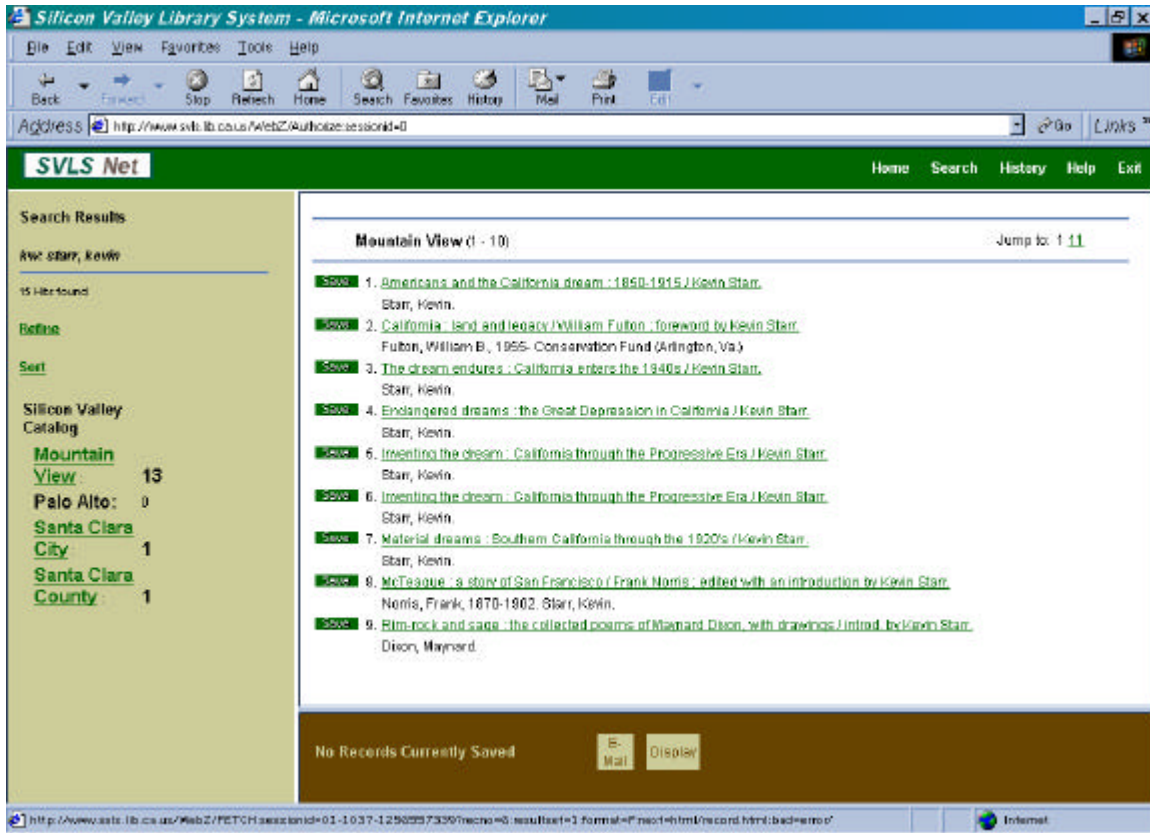
*San Joaquin Valley Library System* – No linked systems project. Most public libraries are connected via a shared EpixTech integrated library automation system.

*Santiago Library System* – Participates in the MCLS/SLS linked systems project.

*Serra Cooperative Library System* – No linked systems project

*Silicon Valley Library System* – Catalog access project using a WebZ gateway server, includes libraries from elsewhere in the Bay Area.

Sample screen from SVLS WebZ server.



*South State Cooperative Library System – No linked systems project*

*Transition:*

What is proposed is to move the Cooperative Library System linked systems efforts to a regional telecommunications model, according to LoC Board priorities. Following are examples of how these linked systems projects might be expanded to serve the planning regions.

1. North State CLS has a linked systems/electronic ILL/authentication proposal called “Connecting to the Millennium”. Expand this project to include all eligible libraries in Planning Region I.
2. MCLS/SLS are in the third year of their “Technology Connection” linked systems/electronic interlibrary loan project. Expand this project to include all eligible libraries in Planning Region IV.

3. MVLS and 49-99 CLS both have small-scale access only DRA Web2 servers. Consolidate these servers into one for Planning Region III and add electronic interlibrary loan.
4. Within Planning Region II are three access servers – Supersearch in NBCLS, WebZ in SVLS/PLS/BALIS and Web2 in MOBAC. Consolidate these various linked systems projects into one access server and provide electronic interlibrary loan to participating libraries.
5. Planning Regions V, VI and VII do not currently have a linked systems project. Fund each of them to study the issue, select an access/electronic interlibrary loan system, and prepare local servers for Z39.50 connectivity.
6. Develop at least one authentication project to help regions and the state to move forward with planned delivery of digital services to all Californians.



## EXHIBIT B

### LIBRARY OF CALIFORNIA ACT

The direction of the Library of California (LoC) telecommunications program, as established in the Library of California Act is as follows:

#### *Statewide:*

18850. The state board shall make available all of the following:

- (a) A telecommunications infrastructure to ensure that all participating libraries have equitable access to the resources and services of all other California libraries.
- (b) A statewide communications system between and among regional library networks, statewide resource libraries, information agencies, and all other organizations or institutions participating in the programs authorized by this chapter.

#### *Regional:*

18842. Each regional library network shall do all of the following:

- (a) Make available a telecommunications system for the transfer of information and communications among its members.
- (b) Provide regional communications based upon the most effective methods of exchanging information among its members.

#### *Initial Implementation:*

Article 8. Transition

18870.

SEC. 2. The sum of five million dollars (\$5,000,000) is hereby appropriated from the General Fund to the Library of California Board for the purpose of funding the startup phase of the Library of California as set forth in Chapter 4.5 (commencing with Section 18800) of Part 11 of the Education Code for expenditure in the 1998-99 fiscal year to pay the costs of all of the following:

- (a) Telecommunications infrastructure to support up to 1,000 libraries, including, but not limited to, the costs of linking systems and installing regional servers.